Basic Internet Video Production Guide

Written By

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Global Broadcast Information Portal

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Cover graphic – High end linear editing suite
en.wikipedia.org/wiki/File:Linear_suite.jpg

Foreword graphic – Drawing by Neža Vidmar

About The Author

David Childers is the Content Manager for the Global Broadcasting portal www.BroadcastingWorld.com. He is very active in the Internet broadcast industry and has written numerous guides and a book about this growing technological field. He is also the webmaster of www.ScenicRadio.com, the global destination for relaxing entertainment.

Mr. Childers' work has been cited in several national and International publications, including these:

Five Essays on Copyright In the Digital Era
Turrer Publishing

Research On High-Profile Digital Video Production
Digital Content Association of Japan

Video Podcasting in Perspective: The History, Technology, Aesthetics and Instructional Uses of a New Medium
Journal of Educational Technology Systems

Video Podcasting: When, Where and How it's Currently used for Instruction
The National Convention of the Association for Educational Communications and Technology

IP Packet Charging Model For Multimedia Services
National University of Rwanda

Preservation of audiovisual mediums: Problems and challenges.
Platform for Archiving and Preservation of Art on Electronic and Digital Media.

P2P Technology Trend and Application to Home Network
Electronics and Telecommunications Research Institute Journal

Peer To Peer Computing - The Evolution of a Disruptive Technology
Idea Group Publishing

Peer-to-Peer Systems and Applications
Lecture Notes In Computer Science
Springer Berlin / Heidelberg

Feedback

Please feel free to contact the author if you have any questions or comments. Your feedback is greatly appreciated.

You can contact the author here: www.KL7AF.com

Foreword

Producing quality video is the result of a creative process, much like writing or painting. You must use certain elements in all forms of art to make the final product enjoyable and pleasing. Video production uses both auditory and visual stimulation to convey a message and care must be taken to effectively present that message.

This is a basic guide that provides the fundamentals for quality Internet video production and promotion. It is important for video producers to have a firm understanding of the fundamentals for this, so I have used my experience and knowledge to write this guide.

I would like to thank Terrence Romero of El Mero Mero Media for contributing to the guide and to Scarlet Coker for providing assistance with the editing of the guide.

It is my sincere hope that the reader will this information useful.

David Childers

September 10, 2010

Posveèeno Neži Vidmar

Raje bi umrl jutri, kot preživel sto let brez tebe.
Pocahontas

We can put television in its proper light by supposing that Gutenberg's great invention had been directed at printing only comic books.

Robert M. Hutchins

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Introduction

Internet video can be a powerful tool for conveying a message to people on a global basis. It can provide a basic environment that allows the use of additional components to enhance overall video presentation. These can consist of audio, text, moving background images, or other elements.

It is important to use comprehensive and efficient planning for creating the video. The skillful adaptation of these various methods will help a video producer fulfill their expectations for the completed project. The use of different hardware, software and / or external equipment can drastically affect the quality of the video. Poor content quality or ineffective production techniques can hinder the ability of an audience to properly perceive and comprehend the video.

Each video should have a unique message and must appeal to an audience. The message must be easy to understand and can transcend cultural and geographic boundaries. It must be created so that the video will draw in the audience and keep them watching.

Intelligent use of time, material, and technology can overcome the need for large sums of money for creating quality video. Simple and practical video production techniques can be used that may surpass using expensive equipment or large production budgets. Spending large amounts of money for video production does not guarantee success.

It is also important to promote the video so that it is recognized and reaches the intended audience. Promoting the video should be a continuous process that uses many techniques. Effective promotion can be accomplished without spending a lot of money and can achieve substantial results.

Planning

The most important part of video production is the planning, which will encompass many factors. This will also determine how the video is implemented and should be reviewed well in advance of the creation of the video.

At least one rehearsal should be carried out if the video is not live. This should include all participants and equipment used. Any observed discrepancies should be addressed and discussed after the rehearsal.

When reviewing the planning and production for the development of a video, it is important that feedback is solicited from the presenters, sound people, and / or set design personnel. It will also allow each group to collaborate amongst themselves and make any recommendations or alterations they think are necessary.

Visualize the planning process with sketches, drawings or story board and notes to incorporate everything desired within the video. The sketches and drawings can convey information that plain text may not be able to do. Try to be as comprehensive with notes as possible.

A time line should be used when planning lengthy videos as this will allow the project to be broken up into smaller sections. Individual sections can receive greater attention than a very large continuous project time line.

It is extremely important to use realistic goals when planning for the video project. This will eliminate stress and confusion for all involved parties. Using unrealistic production goals can have a negative influence on the final product.

The Nuts and Bolts

The video planning must answer three important questions:

Who, What, Why

- Who is the video for, what is the intended audience?
- What is the video about?
  (If possible, identify an issue or a cause rather than identifying a person.)
- Why is this video being made, what is the purpose of the video?

It is very important to make these 3 “W”s very clear in the planning. Defining the audience will help the video to attract a more receptive audience.

What Should The Video Convey

- Inform
  Make the audience aware that something exists.
- Educate
  Make the audience knowledgeable of the presented information. Provide a history, go into detail about it.
- Entertain
  Give the audience a opportunity to smile or laugh.
- Engage
  Motivate or inspire the audience.
- Memorable
  Leave a good lasting impression on the audience.

Keep It Simple Stupid - (K I S S)

Simplicity is the key. Use creativity. Money is not the object, being unique is. Make the video stand out.

Make the content understandable to a wide variety of people, regardless of educational or cultural background.

Content

Repeat the main concept of the video several times throughout the production, to reinforce it. It is important to vary this message, without over emphasizing it or excessive repetition.

The content presented within the video must be credible and accurate. It is absolutely vital to be able to back up / justify all information presented. Tell the truth, don't stretch it.

The video should be to the point, without using a lot of “fluff” or “filler”. It is important to be clear and concise with the presentation. Using “filler” material can confuse or annoy the audience and detract from the overall quality of the production.

Each video should stand on its own if a series is being created. However, all the individual videos should compliment the other videos in the series.

Elements Of The Video

All video's should have three elements, which is the same concept as writing a paragraph.

Introduction

This element conveys what the video will be about and is the most crucial portion. You must make the case for the audience members to continue watching.

Body

This element presents the bulk of the video content and should contain the following:

- Who is the video about.
- What is the video about
- Where is this action taking place.
- Why is the video being made.
- Time frame for the information of the video.

Closing

This element summarizes the content of the video. It should reinforce the introduction.

Copyright Information

- Check all background music for copyright.
- Check all background graphics for copyright.
- Check all background video for copyright.

Copyright statutes and limitations are different for each country, please check with your national copyright agency.

IT MAY BE POSSIBLE to use copyrighted content within a video production UNDER CERTAIN CONDITIONS within the United States. This is covered by the Fair Use Doctrine: en.wikipedia.org/wiki/Fair_use.

It is advisable to seek legal counsel regarding the use of copyrighted content under the Fair Use Doctrine.

Implementation

Ready, Set, Record !

A video production project can easily fall apart if it is not properly implemented. Care needs to be taken in the production of the video to avoid having the finished product appear unprofessional.

Filming

- Pan camera angles properly.
Follow the action as it happens on the set.
- Camera angles.
Use different angles to break up the overall presentation.
- Use proper sound levels.
Do not over modulate the sound.
- Use the directional ability of the microphone.
Point the microphone to the source of sound on the set.
- Try to avoid transitioning to or from extreme lighting environments.
This can cause very poor video rendering.

Setting Video Levels

- Brightness
  * This allows the adjustment of the light intensity within the video.
- Contrast
  * This allows the adjustment of the reflected light within the video.
- Hue
  * This allows the adjustment of the actual colors of the video.
- Saturation
  * This allows the adjustment of the strength of the video color.

It is important to balance out the various video settings to achieve the highest quality content.

Video Resolution

Use the highest optical resolution possible for capturing video.

- A high quality video can be displayed at smaller dimensions with no visible artifacts present.
- A low quality video can be displayed using a larger dimension, however the video will have artifacts present.

Presenters

Audio is an integral part of the video and care must be taken to avoid poor speaking habits.

Will a global audience understand people speaking in the video?
Will the people speaking in the video persuade the audience members to continue listening and watching?
Will the people speaking in the video use terms and concepts easily understood by a global audience?

- Use proper grammar.
- Avoid using slang grammar.
- Be articulate in speaking.
- Avoid using excessive hand / arm motion or moving around.
- Use “Que” cards or a prompter to avoid memory lapses.
- Be persuasive about the presentation.
- Be enthusiastic about the presentation.
- Speak into the microphone, not away from it.

Foreground

The viewed area in the video should consist of what is being presented. Wide angle shots should only be used if the presenter is using displays or set props.

Background

Do not use a background that will over shadow what is being presented. This will cause the audience to concentrate on that instead of the content being presented. Use soft and pleasing colors for the background.

Graphics

- Use background images to enhance the content being presented. This includes pictures or displays.
- Use embedded captions during the video when discussing key points or emphasizing important concepts.

Surrounding Environment

It is important to limit ambient influences which can detract from the overall quality of the video content.

These influences include:

- Excessive light.
- Excessive sound.
- Excessive vibration.

Use care in selecting the filming location if the video is being produced in an outside environment.

- Avoid areas where shadows can affect the lighting.
- Avoid areas where echo or reverberation can affect the audio.
- Record video facing away from the sun or high intensity light sources.

Set Area

- Do not clutter the set area with excessive props.
- Try to limit general movement around the central area being used in the video.
- Try to limit the number of people around the central area being used in the video.

Encoding The Multimedia

Video

Frames Per Second

This represents the frequency at which still pictures are displayed per second. Television PAL and SECAM standards specify 25 frames per second, while NTSC specifies 29.97 frames per second. Film is shot at the rate of 24 frames per second. The minimum frame rate to achieve the illusion of a moving image is approximately fifteen frames per second.

Interlace Scanning

This technique uses two fields to create one frame. One field contains all the odd lines of the image, the second field contains all the even lines of the image. This is a technique for improving the quality of video without requiring excessive bandwidth.

Progressive Scanning (Noninterlaced Scanning)

This technique requires all the lines of each frame to be drawn, in sequence, during each refresh period. This results in a higher spatial resolution and a lack of visual artifacts.

Deinterlacing

This technique is used to convert interlaced encoded video, such as analog or DVD material into progressive encoded video.

Bit Rate

This measures of the rate of information content in a video stream. It is measured by using the bit per second (bit/s or bps) or Megabits per second (Mbit/s). A higher bit rate allows better video quality. Increasing the bit rate requires additional bandwidth.

Variable Bit Rate (VBR)

A variable bit rate video uses more bits on a fast motion scene than it does on slow motion scenes of similar duration, however it achieves a consistent visual quality. This is used to maximize the video quality and minimize the bit rate.

Constant Bit Rate (CBR)

The bit rate remains constant and does not fluctuate. This technique is used when the available bandwidth is fixed.

Scale

This sets the ratio in which the video will be rescaled while it is being encoded. This can also be adjusted to reduce the bit rate of a video.

Width

This sets the width of the encoded video in pixels.

Height

This sets the height of the encoded video in pixels.

Audio

Samplerate

This is a measurement of the frequency per second in which a snapshot of audio information is captured during encoding.

A sample rate of 44.1 kHz is commonly used for audio recording as this is the standard used for CD audio. Higher bit rates, such as 160 and 192 kbit/s, have started to become popular because of the increase in broad band Internet access.

Channels

This sets the number of channels of the encoded audio stream. This is useful for codecs that do not support multiple channels.

Constant Bit Rate (CBR)

The bit rate remains constant and does not fluctuate. This technique is used when the available bandwidth is fixed.

Variable Bit Rate (VBR)

The bit rate will fluctuate and vary. This is used to maximize the sound quality and minimize the bit rate.

Post Production

The Almost Complete Masterpiece

The raw multimedia files are ready and its time to add the finishing touches.

- Review the video and make edits as required.
- Add any required background music.
- Add any required special effects.
- Ensure that the audio and video are in synchronization.
- Watermark the video with your company or website logo.
- **Ensure Quality For The Finished Product.**

Contact Information Incorporated Into The Video

- Website address.
  - * Embed the URL of your website.
- Social Media.
  - * Embed the URL of your social media website.
    - Facebook
    - Twitter
- E mail contact information.
  - * Embed your E-Mail address.

Adding the contact information will encourage people to visit your website / social media page or contact you directly through E-Mail.

Audio and Video Encoding

Use common codecs and formats that will not require viewers to download additional software to view the video.

Archive

Make digital backup copies of the video for archival purposes.

Marketing / Promotion

Spread The Word

A lot of time and resources have been used for creating a quality video and it is important to achieve the greatest exposure for the finished product. It will be necessary to develop a marketing campaign that will help the video get maximum exposure.

Identification Elements

It is very important to properly tag the video. If the video is not tagged properly, then it will not be found by the audience that it is intended for.

- Title.
  * Choose a title that best expresses the intent of the video and will generate interest in the video.
- Key words.
  * Choose key words that best expresses the intent of the video and attracts viewers.
- Thumbnail image.
  * Choose an image that will generate interest in the video and attracts viewers.
- Description.
  * Write a description that best expresses the intent of the video and will generate interest in the video.

Monitor web traffic going to the video and adjust the tag information as necessary to maximize traffic flow.

People Networking

- Writing.
  Articles can be written that are related to the content of the video and published on the web.
  (Direct readers to the video page within the article.)
  * www.ezinearticles.com
  * www.hubpages.com
  * www.squidoo.com
  * knol.google.com
- Forums.
  Become members of Internet forums related to the content of the video.
  * Spread the word and make relevant comments about the video without spamming.
    - Include the address of the video in forum signature.
- Blogs.
  Seek out blogs that are related to the content of the video.
  * Spread the word and make relevant comments about the video without spamming.
- Social media.
  * Create a social media fan page for the video:
    - Facebook
    - Twitter
  * Encourage people to follow the fan page.
- Embed videos on web pages:
  * Social media website.
  * Business website.
  * Personal website.
- Allow people to comment on the video.
- Allow people to embed the video on other websites.
- Create and use RSS feeds if you plan on making multiple videos.
- Request links placed to your video on outside websites.
- Interview with local media outlets.
  * News paper
  * Magazine
  * Radio
  * Television
- Announce on Craigslist.
- Use E-Mail news letter to promote video.

Submit Videos To Specialty Websites

These are user driven social media websites that allow users to find content rated by peers based on interest.

- General content
  * www.digg.com
  * www.reddit.com
  * www.subbmitt.com
  * www.fark.com
  * www.mixx.com

- For technical content
  * www.slashdot.org

These are social bookmarking web services that allow storing, sharing, and discovering web bookmarks.

  * www.delicious.com
  * www.stumbleupon.com

Promote online video and drive traffic to them.
  * www.tubemogul.com

Open source, non-profit video player software that allows the submission of video and RSS feeds.
  * www.getmiro.com

Equipment

What You See Is What You Get

Proper equipment must be used to maintain a high standard of quality for the video production. No amount of planning or implementation can overcome sub standard equipment.

Lighting

- Ensure that there is adequate natural or artificial light.
- Do not over power the video camera with excessive light sources.

Sound

- Use external dynamic directional broad frequency microphones.
- Ensure that a proper wind screen is available if the microphone is used in a windy environment.
- Ensure that there are adequate lengths of audio cable available.
- An audio mixer board is necessary if there are multiple microphones being used.

Camera

- The video camera must have an adequate optical resolution that can be used for close-in or far-off shots.
- The video camera must have an adequate visual resolution to ensure quality video is being shot.
- The video camera must have a tripod or other piece of equipment that will prevent it from moving around.

Power Source

- It is important to have an adequate supply of charged battery packs for all portable electronic equipment.
- It is important to have an adequate power source to power non portable electronic equipment.
- It is important to have an adequate number of electrical extension cords available as required.

Environment

It is important to protect all equipment from harsh elements.

These elements include:

- Rain.
- Temperature.
- Ice.
- Heat.

Software

Open source software can be used in lieu of expensive commercial hardware for video production needs. The software listed here is available for various operating platforms.

Audio Editor

Audacity
This software is for recording and editing sounds. It is available for Mac OS X, Microsoft Windows, GNU/Linux, and other operating systems.
audacity.sourceforge.net

Information for cleaning audio files with audacity:
www.geeks.com/techtips/2006/techtips-10dec06.htm
www.flyingsnail.com/Mac/audionoiseremoval.html

Video Editor

OpenShot
A non linear Gnome based video editor for Linux.
www.openshotvideo.com

Avidemux
A video editor designed for simple cutting, filtering and encoding video. It is available for various operating systems.
fixounet.free.fr/avidemux

Multimedia Encoder / Transcoder

VLC
The software can record, encode, and transcode multimedia and is available for various operating systems.
www.videolan.org

Information for recording video with a video camera using VLC:
www.scribd.com/doc/25400/Video-Recording-With-VLC

Information for transcoding video using VLC:
wiki.videolan.org/Transcode

Virtual Cam Software

WebcamStudio
This application creates a virtual webcam that can mix several video sources together and is available for the Linux platform.
www.ws4gl.org

ucanvcam
This application is a virtual webcam device that allows you to take a webcam feed and transform it in many ways. For the Windows and Linux platforms.
www.makesweet.com/webcam/ucanvcam

Tutorials For Putting Watermark / Logo On Video

www.youtube.com/watch?v=XKPypXzpI7I
neuron2.net/logo/logo.html

forum.videohelp.com/threads/191496-Put-a-custom-watermark-on-your-video

Public Domain / Creative Commons Content

It is possible to use existing multimedia content that does not require royalty payments for inclusion in a video produciton. Public domain statutes are different for each country, so it is important to check with your national copyright agency.

The license that this multimedia content falls into is covered under three categories:

Multimedia specifically placed into Public Domain by the creator
All Intellectual Property rights have been waived and the material is released to the public for any commercial or noncommercial use. The material can be mixed with other content as well, however the derived work must also be placed into Public Domain.

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www.free-loops.com

Creative Commons and Public Domain video:
www.archive.org/details/feature_films

Creative Commons music and independent musicians:
www.soundclick.com
www.artistserver.com
www.jamendo.com/en
www.tribeofnoise.com
freemusicarchive.org/curator/creative_commons
dig.ccmixter.org
www.mutopiaproject.org